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ABSTRACT

Prepared for instruction in the use of rifles, air guns, shotguns, pistols, and hunter safety, this guide supplements other materials which are available from the National Rifle Association of America, the National Shooting Sports Foundation, the American Association for Health, Physical Education, and Recreation, industry, and other sources. The guide should be helpful in schools, colleges, clinics, and workshops which instruct in the shooting sports. Major divisions are: (1) Rifles and Air Guns, (2) Shotguns, (3) Pistolry, and (4) Hunter Safety. Each is in outline form and consists of gun parts and types, techniques, activities, suggested knowledge tests, and a 1-, 4-, 5-, 10-, or 20-hour lesson plan outline. The guide also includes a list of reference materials, a glossary of shooting sport terms, and the 10 Commandments of Safety. (NQ)

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A GUIDE TO INSTRUCTION IN THE SHOOTING SPORTS

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- RIFLES
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- PISTOLS
- HUNTER SAFETY

OUTDOOR EDUCATION PROJECT

American Association for Health, Physical Education, and Recreation
1201 Sixteenth Street, N. W., Washington, D. C. 20036

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FOREWORD

This tentative guide was prepared for use in instruction in rifles, air guns, shotguns, and pistols. It supplements other materials that are available from the National Rifle Association of America, the National Shooting Sports Foundation, the American Association for Health, Physical Education, and Recreation, industry, and other sources. The guide should be especially helpful in schools and colleges, and in clinics and workshops which include instruction in the shooting sports.

Acknowledgement is given to the following committee members who gave much time and effort in preparing and assembling the information contained in the guide:

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It is hoped that this guide will make a contribution to other materials in shooting. Suggestions on how it may be improved are solicited from those who use it.

Julian W. Smith, Director
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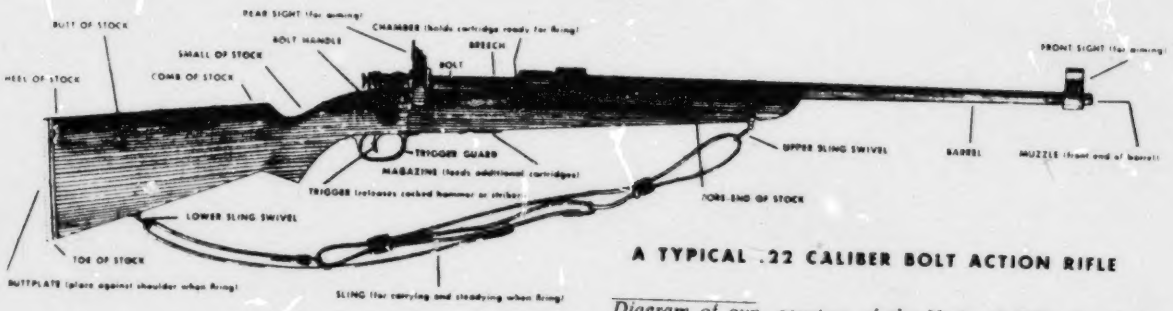
RIFLES AND AIR GUNS

NOMENCLATURE



A TYPICAL .22 CALIBER BOLT ACTION RIFLE

Diagram of gun, courtesy of the National Rifle Association

I. Action
   - A. Bolt or breech block
   - B. Firing pin
   - C. Trigger mechanism

II. Stock
   - A. Butt
     1. Comb
     2. Small
     3. Heel
     4. Toe
     5. Butt plate
     6. Sling swivel
   - B. Fore-end or forearm
     1. Sling swivel

III. Barrel
   - A. Breech
   - B. Chamber
   - C. Bore
     1. Lands and grooves
     2. Smooth-BB's, pellets
   - D. Muzzle

TYPES OF ACTIONS

TEACHING HINT: Use licorice stick to illustrate lands and grooves

IV. Sights
   - A. Open
     1. Rear - V or U
     2. Front - post or bead

B. Peep
   1. Rear - aperture or peep
   2. Front - post, bead, aperture

C. Telescope - vary in type of reticle and optic power

V. Safeties - more common types include
   A. Hammer at half-cock
   B. Slide type
   C. Push-button type

Safeties are mechanical, only meant to supplement proper gun handling

VI. Types of actions
   A. Bolt
   B. Lever
   C. Hinge or break-open
   D. Auto-loading
   E. Pump or slide

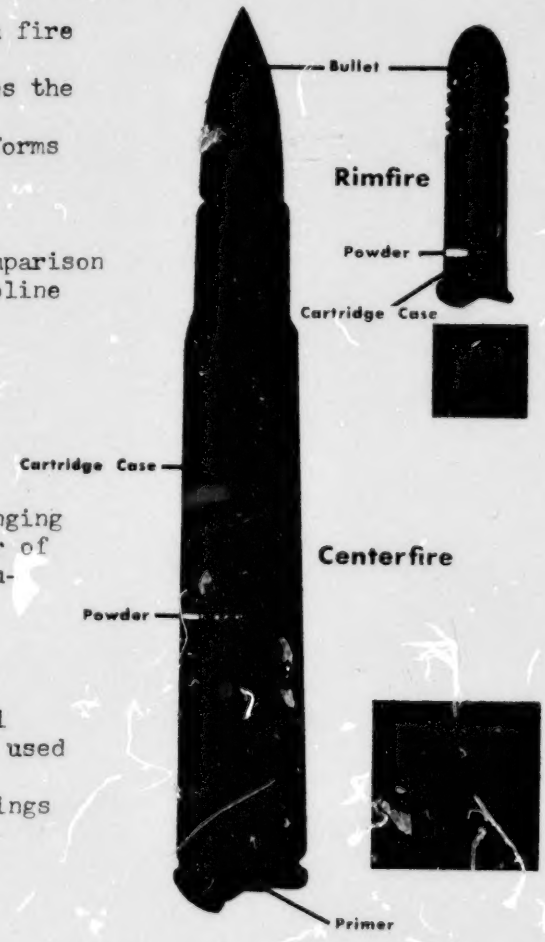
TEACHING HINT: Instructors aid to demonstrate actions: pliers (lever), door latch (bolt), hand spray can (pump), door hinge (hinge).

AMMUNITION

I. Cartridges - center fire and rim fire
   A. Case - the container
   B. Primer - explodes and ignites the powder
   C. Powder - burns rapidly and forms expanding gases
   D. Bullet - the projectile

TEACHING HINT: Instructor may use comparison of cartridge to a gasoline engine:

Primer---spark
Powder---gasoline
Bullet---piston
Case-----block



II. Caliber - variety of choices ranging from .177 to over .450 (diameter of bore and bullet measured in thousandths of an inch)

III. Bullet types and uses

   A. All lead, soft nose, partial jacket, and hollowpoint are used for hunting because of the expansion property which brings about quicker kills.

B. Full metal jacket (hard nose) for competitive shooting, leaves clean hole for scoring purposes.
C. Air rifles use BB's, pellets, and darts, powered either by spring or CO_2.

RIFLE USES

I. Hunting: Generally the bigger the game the larger the caliber.
   A. .22 rimfire and air rifle (pellet gun) for small game - rabbits, squirrels
   B. .222, .243, .257 for varmits and up to medium sized game - woodchucks, coyotes, antelope
   C. 30-30, 30-06, .375 for large game - deer, bear, elk, moose

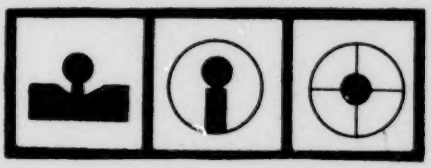
II. Competition:
   A. Air guns
   B. Small bore - .22 rimfire
   C. Big bore-high power - center fire cartridges used.

III. Practice and recreation
   A. Plinking
   B. Warm up for hunting
   C. Warm up for competition

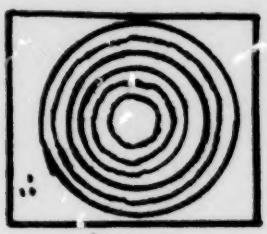
TECHNIQUES OF SHOOTING

I. Sight Picture - Necessity to have front and rear sights properly aligned and then correctly positioned on target.

TEACHING HINT: These aids may be used to learn proper sight picture:
   A. Sighting bar
   B. Paige Sighting Device
   C. Triangulation



II. Sight Adjustment
   A. Never attempt to make sight adjustments until the shots are grouped.
   B. When the shots are grouped but not in the bullseye, move the rear sight in the direction in which the shooter wants the group to move.



To get correct grouping, move rear sight right and up.

C. Lateral sight adjustments are called windage.
D. Vertical sight adjustments are called elevation.

III. Breath Control - Necessity to have body as still as possible
A. Breathing causes rise and fall in chest.
B. Necessary to take several deep breaths, most air is then exhaled and the breath is held until shot is fired.
C. If breath is held too long, muscle tremors start; under these conditions, the shooter should relax and start over.

IV. Trigger Control
A. Trigger is held between the tip of the finger and the first joint.
B. Squeeze, do not pull!
C. Squeeze straight back.
D. Concentrate throughout squeeze to avoid "flinching".

TEACHING HINT: Simulate the squeeze to a medicine dropper, squeezing one drop at a time.

V. Follow-through
A. Shooter should maintain the same sight picture for 2 or 3 seconds after the shot
B. Helps shooter concentrate on basic techniques

TEACHING HINT: Place an empty cartridge or dummy round into the chamber without the shooter's knowledge to check follow-through, flinching, or trigger squeeze habits.

VI. Rhythm
A. Shooter must develop habit of correctly aiming, breathing, squeezing trigger, and following through. Sequential cadence of these activities is known as rhythm.

TEACHING HINT: Rhythm can be practiced by dry-firing.

VII. Calling the Shot - Shooter describing the location of the hit after he has shot. This is done on "clock system", calling the hour and the ring.

THE SHOOTING POSITIONS

General Directions for the 4 standard shooting positions:

A. Shooter makes quarter turn (45°) to the right of the line of fire
B. Natural point of aim should be established by shifting the body so as to bring it into proper alignment (natural) with the target. Do not use muscles to force the gun into proper alignment.

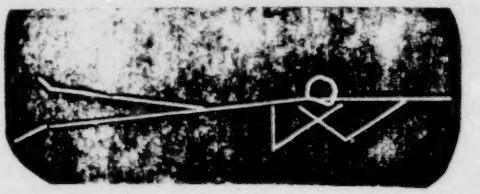
TEACHING HINT: Natural point of aim can be established by closing the eyes before shouldering the gun. After the eyes are opened, the point of aim is corrected by shifting the body.

C. Gun should rest in the palm of the left hand, without gripping the fore-end.

D. The left elbow should be directly under the barrel.
E. Place cheek against the stock firmly and consistently.
F. Pull the stock firmly against the shoulder with the right hand.
G. The use of a sling is advantageous.
   1. Place the sling loop on upper arm, avoiding direct placement on biceps
   2. Adjust sling tightly to eliminate the use of muscles in supporting the rifle
   3. Left hand should be placed against the upper sling swivel whenever possible

TEACHING HINT: Use of a sling might be likened to a triangle, which gives maximum strength and support.

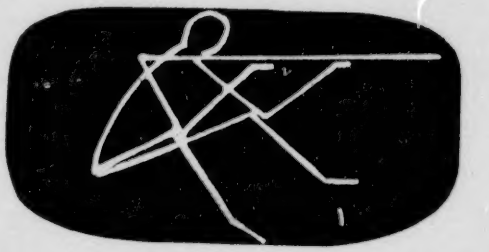
I. Prone
   A. Easiest position to learn fundamentals
   B. Generally the most accurate position
   C. Body stretched out and relaxed
   D. Legs spread and both extended, or right leg bent
   E. Right elbow off to the side, lending stability to the position without supporting the rifle itself



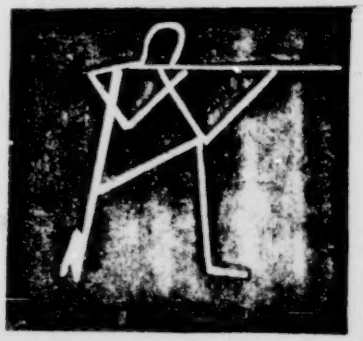
TEACHING HINT: A bench rest position may be substituted for prone as the first position for beginners.

II. Sitting - four variations
   A. Crossed legs
   B. Crossed ankles
   C. Open legs - feet apart
   D. Open legs - feet together

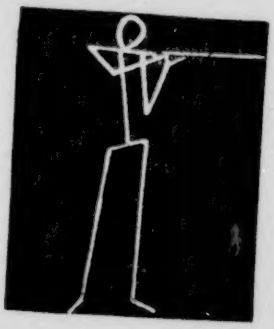
Similarities in all four variations:
A. Elbows braced in front or to either side of the knees. Avoid elbow tip to knee contact, too unstable.
B. Body weight is forward
C. Second most accurate position
D. Very practical hunting position



III. Kneeling
- A. Shooter sits on heel or inside of right foot
- B. Left elbow is over left knee
- C. Height of right elbow may be individually determined
  1. High elbow, better pocket
  2. Low elbow, often more relaxing
- D. Not as accurate as prone or sitting positions
- E. Easily achieved position for the field
- F. Variations:
  1. High kneeling - left foot under knee, buttocks on right knee
  2. Low kneeling - left foot in front of knee, buttocks on instep of right foot



IV. Standing or Off-Hand
- A. Impossible to hold the rifle perfectly steady in this position. Concentrate on keeping the barrel movement to a minimum during trigger squeeze.
- B. Head should be kept nearly erect.
- C. Butt-plate should be high on shoulder.
- D. Slings are infrequently used in competition, but highly desirable and useful hunting.
- E. Variations:
  1. Military
     - a. Left elbow under rifle without making contact with the body.
     - b. Right elbow should be kept shoulder high or higher.
     - c. A hasty-sling is occasionally used in competition. It is also recommended for hunting.



2. N.R.A.
   a. Upper left arm rests against the body
   b. Left elbow rests on hip
   c. Body is inclined backward, thrusting the left hip forward and upward
   d. In order to elevate the rifle, it is necessary to draw the left hand toward the trigger guard and/or extend the thumb and fingers upward, resting the rifle on the finger tips.

RANGES

I. Indoor
   A. Basic limitation is size of facility. May use rooms, gymnasiums, or basements with windowless and doorless backwalls capable of stopping wild shots. Doors latched on inside.
   B. Suggested minimum distances for shooting ranges:
      1. Air gun (smooth bore) = 15 feet
      2. Air rifle (rifled bore) = 25 feet
      3. .22 rimfire rifle = 50 feet
      4. High power rifles = Not recommended to shoot indoors
   C. Backstops:
      1. Types
         a. Permanent
         b. Portable - lends flexibility to program
      2. Construction
         a. Rifle
            1. Steel back, $\frac{1}{4}$th inch or more, placed on 45° downward angle with sand base to catch deflected lead.
            2. Steel plate sides
            3. Target holder - wire or wood box placed in front of backstop
            4. Adequate lighting, especially on target
         b. Air Gun
            1. Corrugated box filled with newspapers or with hanging canvas backdrop
            2. Commercially available traps

II. Outdoor
- A. Ideal backstop is a rock free earth or sand mound at least 30 feet high; wooden target holders erected in front of mound.
- B. If no mounds available, wooden cribs which hold sand, or metal backstop similar to indoor type can be constructed.
- C. A safety zone of 1700 yards behind the target is desirable for small bore; more for high power.
- D. The direction of shooting should be to the north or northwest.
- E. If adequate space is not available, safety ranges may be constructed.

III. Range equipment: Indoor and outdoor ranges should have -
- A. Guard rails separating spectator area from firing line.
- B. Shooting benches and spectator seats.
- C. Gun racks
- D. Sanitary facilities and fresh water
- E. First aid equipment
- F. Optional - mats, kneeling pads, sand bags, spotting scopes, scorers table.

* NOTE: For details on range construction, send for range plans from the National Rifle Association.

RANGE SAFETY

Rules and Regulations

I. The "Ten Commandments of Safety" apply to range shooting generally. (See inside back cover.)

II. Specific rules for ranges:
- A. On firing line guns are pointed down range.
- B. Actions are open unless firing.
- C. Load singly except during sustained fire exercises.
- D. Shooters must remain behind the firing line until the line is cleared.
- E. No cross-firing.
- F. Obey all range commands instantly.

III. Range commands
- A. Relay (1st, 2nd, etc.) to the firing line
- B. Ready on the left
- C. Ready on the right
- D. Load (Coaches cock the guns in Air Rifle program)
- E. Ready on the firing line
- F. Fire _____ shots, commence firing
- G. Cease firing
- H. Open action
- I. Line is clear, retrieve targets

TEACHING HINT: Instructors should have an emergency whistle which is blown if any unsafe condition develops during the firing period. There are a variety of Range Command Sequences, the number and complexity depend upon the type of program.

ACTIVITIES RELATED TO RIFLES

As in most activities, preparation for the activity is just as much fun as the activity itself.

I. Reloading
   A. Economy
   B. Uniformity
   C. Flexibility
   D. Personal satisfaction

II. Amateur Gunsmithing - Shouldn't be entered into on a "hit-miss" basis
   A. Enables one to make minor repairs on own guns
   B. Enables one to improve on the appearance and/or function of his gun, i.e.: installing recoil pad, checkering stock, or building a new stock.
   C. Good sense and intellect should be followed in any gun repair done by amateurs.

III. Collecting - Rifles, cartridges, accessories, and related artifacts
   A. Enables one to explore the historical significance of a particular piece.
   B. Enables the opportunity to perform mild restoration, refinishing, etc.
   C. Enables one to trade and compete with other enthusiasts.

IV. Muzzle Loading
   A. Opportunity to explore the historical significance of a particular gun.
   B. Enables shooter opportunity to hunt and/or compete with particular load he desires with a much greater personal challenge.

V. Informal Shooting Games - rifles and air rifles
   A. Mothballs a la Mode - Heat one end of a short piece of wire and insert in a mothball. Bend other end and hang on a string across the backstop.
   B. Paper Animal Targets
   C. Wooden Blocks - Cut blocks from 2"x2" piece of pine or fir
   D. Old Golf Balls - Sink a screw or screw eye into a golf ball. Using .22 shorts, CO_2 pellets, or BB's, the target will keep a student busy all afternoon without wearing out the golf ball.
   E. Clay Pigeons
   F. Thumbtack Special - Rifles ONLY
      Push white tacks into the centers of indoor targets, shoot standing.
   G. Swinging Targets - Rifles ONLY
      Fill tin cans with water and suspend them on string. When can is empty, try to hit the string.
   H. Phonograph records - Rifles ONLY
      Set up records in the sand or earth so that light shines through the hole. The holes the bullets make will show instantly and help the shooter to correct his next shot.

SUGGESTED OBJECTIVE QUESTIONS

1. The range of a high power rifle is approximately:
   a. ½ mile
   b. One mile
   c. Three miles

2. When a cartridge is fired, the powder:
   a. burns
   b. explodes
   c. expands

3. The breech of the rifle is:
   a. the front end of the barrel
   b. the rear end of the barrel
   c. the pump action of the gun

4. It is well known that some calibers of rifle cartridges are so nearly identical in measurements that they can actually be placed in the chamber of a rifle designed for another cartridge. Would you say that this:
   a. Would produce inaccurate results.
   b. Would make little or no difference if the cartridge fits well enough to fire.
   c. Could be dangerous due to the possibility of creating excessive chamber pressure for a particular gun.

5. The safety on a bolt action rifle is usually located:
   a. near the trigger guard
   b. near the rear of the bolt
   c. inside the trigger

6. The half-cock safety is located on a rifle with:
   a. an outside hammer
   b. an inside hammer
   c. a bolt action

7. The basic rule for sight adjustment is always:
   a. to find out from some older shooter what the proper sight setting is for that particular day.
   b. to bore sight the rifle carefully.
   c. to move the rear sight in the direction that you want your hits to move.

8. A barrel with lands and grooves is usually associated with:
   a. a magnum shotgun
   b. a rifle
   c. BB guns

9. The safety on a rifle is:
   a. a positive way of preventing the gun from being fired.
   b. of no value at all.
   c. used to supplement good gun handling.

10. After cleaning a rifle in regular use:
    a. it should be heavily oiled.
    b. cotton should be placed in the muzzle to keep out moisture.
    c. it should be lightly oiled.

11. When you have the correct peep and post sight picture, you see:
    a. the top of the front sight in the exact center of the rear aperture with the bullseye squarely on top of the front sight.
    b. the bullseye exactly in the center of the rear aperture and balanced on top of the front sight.
    c. the front sight exactly centered in the center of the bullseye.

12. "Zeroing in" refers to:
    a. shooting 5 rounds in the bullseye.
    b. adjusting the sights of the gun for accurate shooting.
    c. to calling your shots.

13. Before hunting with a rifle you should:
    a. sight it in each season before hunting.
    b. not bother since all guns are sighted in at the factory.
    c. assume that sights will not move once they are set.

14. The part of the rifle that holds the extra cartridges is:
    a. the receiver.
    b. the magazine.
    c. the breech.

15. The action of the rifle is:
    a. the release of the firing pin when the trigger is squeezed.
    b. the way the gun recoils when fired.
    c. the moving parts that load, fire, and eject the cartridges.

16. The three major assembly groups are:
    a. sights, barrel, stock.
    b. barrel, action, stock.
    c. stock, barrel, sling.

17. When sights are not exactly aligned with the target after getting into the prone position, they should be brought into line by:
    a. pivoting entire body around the elbow which is directly under the rifle barrel.
    b. keeping body in place and shifting elbows.
    c. keeping elbows and body in place and shifting barrel of gun.

18. Follow through is vital to good shooting because:
    a. calling the shot eliminates the need to score targets.
    b. it helps to keep the gun from recoiling too much.
    c. it aids the shooter in concentrating on basic techniques.

19. The major difference between rifles and shotguns is found:
    a. in the length of barrel.
    b. inside the barrel.
    c. outside diameter of barrel.

20. The speed of a bullet measured in feet per second is called:
    a. trajectory.
    b. velocity.
    c. ballistics.

21. The most probable cause of guns blowing up is:
    a. the chamber pressure caused by the expanding gases is too great.
    b. the breech is not quite closed and the escaping gases caused the accident.
    c. the firing pin failed to function and the bullet did not leave the gun.

22. The path of a bullet is the:
    a. trajectory.
    b. velocity.
    c. ballistics.

23. The basic shooting positions include:
    a. sitting, kneeling, squatting, prone.
    b. kneeling, squatting, off-hand, prone.
    c. squatting, kneeling, off-hand, sitting.
    d. sitting, prone, off-hand, kneeling.

24. The suggested minimum distance for a smooth bore air rifle range is:
    a. 10 feet.
    b. 15 feet.
    c. 25 feet.
    d. 100 feet.

25. The most accurate sight is:
    a. open.
    b. peep.
    c. telescope.

RIFLE AND AIR GUN
5 HOUR LESSON PLAN OUTLINE

HOUR 1

I. Introduction of Instructor (classroom)
   A. Purpose of course
   B. Sponsorship

II. Introduction to Rifles and Air Guns
   A. Nomenclature of rifle, include types of sights (use visuals if possible)
   B. Nomenclature of ammunition
   C. Use of rifles - Activities

III. Rifle Handling and Safety

IV. Rifle care and storage

HOUR 2

I. Review Nomenclature of Rifles and Ammunition (classroom)

II. Demonstration - types of actions

III. Demonstrate shooting techniques
   A. Breath control
   B. Trigger squeeze
   C. Sight picture and adjustment
   D. Rhythm

IV. Demonstrate four basic shooting positions
   A. Prone
   B. Sitting
   C. Kneeling
   D. Off-hand

V. Scoring of targets

VI. Students practice using air guns

HOUR 3

I. Range Procedure, Safety and Handling practices - meet on indoor or outdoor range.

II. Review Orientation to air gun - action, loading, and cocking procedures.

III. Sighting in air rifle

IV. Review prone position

V. Class participation with air gun, using pupil-coach method. Shoot from prone position. If not possible, use a modification such as the bench position.

HOUR 4

I. Orientation to Rifle, Loading - use indoor or outdoor range.

II. Review of shooting techniques

III. Review of range safety

IV. Sighting in rifle

V. Class Participation, using pupil-coach method. Shoot from prone position. If this isn't possible, using a modification such as the bench position.

HOUR 5

I. Review Session (20 minutes)
   A. Nomenclature of Rifles and Ammunition
   B. Types of Actions and Uses
   C. Shooting Positions
   D. Handling Practices and Range Safety

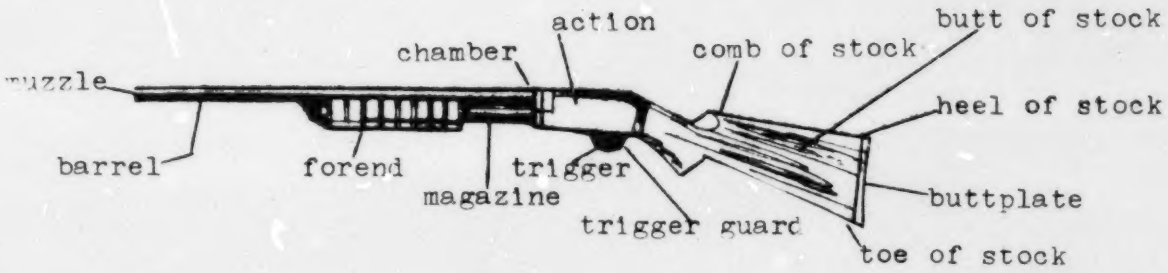
II. Test - see suggested objective questions

III. Correction of tests with short time for questions

TEACHING HINT: Sample rifles, wall charts, slides and movies should be used wherever applicable.

SHOTGUNS

NOMENCLATURE



SHOTGUN ACTIONS

I. Hinge or break open action
   A. Single barrel
   B. Side by side double barrel
   C. Over and under double barrel

II. Bolt action - still used but less popular than the other three shotgun actions.

III. Pump or slide action

IV. Self-loading or autoloading action

TEACHING HINT: When possible, have examples of each action on hand to demonstrate how each works. If not, charts are available and should be used.

CHOKE

I. Degree of choke is determined by amount of constriction at the muzzle.
   A. Full choke - maximum constriction (approximately 70-80% pattern in 30" circle at 40 yards)
   B. Modified choke - medium constriction (approximately 55-65% pattern in 30" circle at 40 yards)
   C. Improved cylinder - little constriction (approximately 45-50% pattern in 30" circle at 40 yards)
   D. Cylinder bore - no constriction (approximately 35-40% pattern in 30" circle at 40 yards)

II. Uses of shotguns are greatly dependent upon degree of choke.
   A. Full choke - long range shooting - ducks, geese, doves, etc.
   B. Modified choke - popular all-around choke - pheasants, rabbits, etc.
   C. Cylinder bore or improved cylinder choke - close range shooting, such as fast moving small game in dense cover - grouse, rabbits, etc.

TEACHING HINT: Demonstrate effect of choke by having examples of shot patterns on paper, using various chokes.

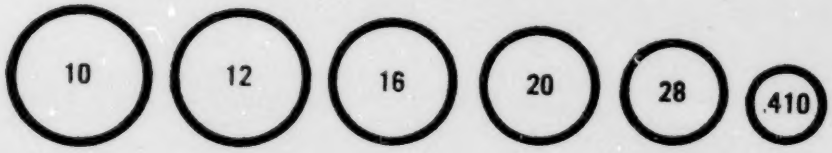
GAUGE

I. Shotguns are rated according to bore diameter which is referred to in terms of gauge.

II. Originally, gauge was determined by the number of lead balls of a given bore diameter which would make a pound.

III. As the bore size gets larger the gauge number gets smaller, and vice versa.

BORE SIZES



IV. The .410 "gauge" is actually a caliber as it is a measurement of bore diameter in inches. This gauge is recommended for the "expert" rather than the novice.

V. As gauge increases generally the weight of the gun increases. Likewise, as the gauge increases the shotshell generally has a greater shot capacity and, therefore, greater hitting potential.

VI. When selecting gauge, consider intended use and intended user.

TEACHING HINT: Have examples of shotguns in various gauges for demonstration of relative size.

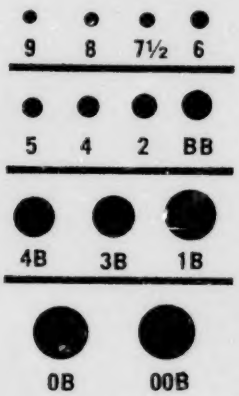
AMMUNITION

I. Shotgun ammunition is referred to as shotshell or just shell.

II. Nomenclature of shotshell
   A. Head - brass or other metal, forming base of shell.
   B. Base - cardboard or plastic cylinder containing shotshell components.
   C. Primer - small cap containing a sensitive explosive compound. This cap is fitted in the center of the head, and when struck by firing pin it ignites the powder.
   D. Powder - compound which, when ignited by primer, burns rapidly, forming gases that expand to propel shot out of the barrel.
   E. Wads - single or multi-unit made of plastic or fiber which maintains pressure on powder and occupies space between powder and shot.
   F. Shot - projectiles usually consisting of chilled lead pellets.
   G. Crimp - method of closing mouth of case to contain components.

TEACHING HINT: Shotshell nomenclature and sequence of firing can be demonstrated by using a cutaway dummy shell or by a demonstration of reloading.

III. Shot sizes
   A. Shot size diminishes as the number designation gets larger.

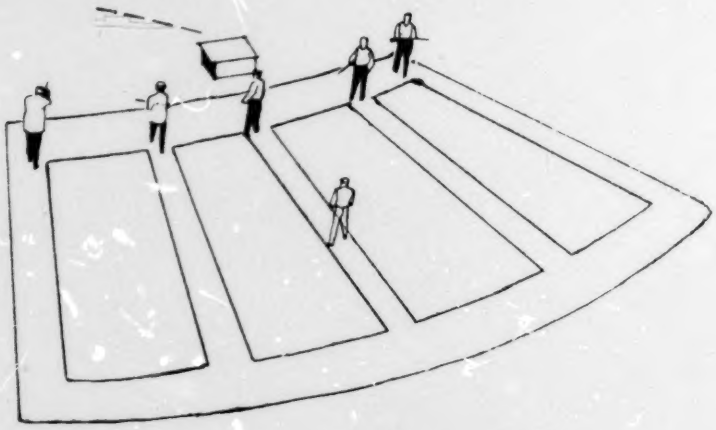


   B. It is important to use the right shot size for a particular kind of shooting. This depends on conditions and individual choice, but some common examples are:
      1. #9, #8, and #7½ - trap and skeet, grouse, quail, and woodcock.
      2. #7½, #6, and #5 - pheasants, rabbits, squirrels, crows, and ducks over decoys.
      3. #5 and #4 - ducks and geese over decoys
      4. #2 and BB - geese, fox, and turkey
      5. buckshot - big game

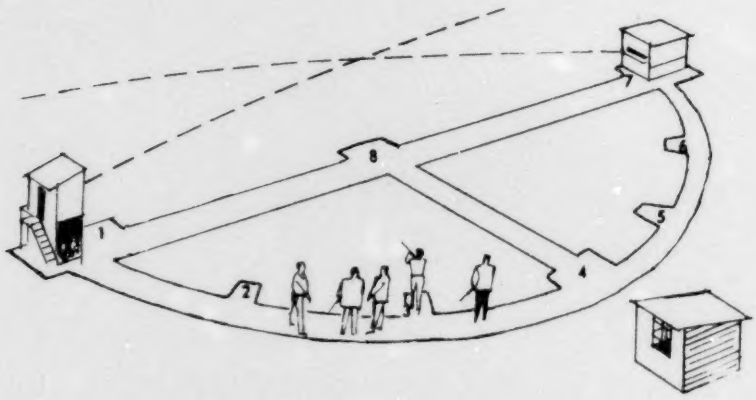
SHOTGUN USES

I. Hunting
   A. Small game
   B. Waterfowl
   C. Big game

II. Competition
   A. Trap
      1. Single trap house
      2. Five shooting stations in fan shape behind trap house
      3. Five shots fired by each competitor at each station



   B. Skeet
      1. One high house and one low house
      2. Eight stations
      3. A high house bird and a low house bird is fired from each of the eight stations. Doubles (high and low house birds thrown simultaneously) are then shot from stations 1, 2, 6, and 7. The first miss is refired which accounts for the 25th. shell.



C. International clay pigeon - similar to, but more difficult to shoot than American trap. (i.e., birds are thrown faster and further and birds are thrown at more varied and difficult angles.)
D. International skeet - field layout the same as American skeet, but certain rules make it more difficult. (i.e., birds are thrown faster and further, butt of gun must be on hip until bird appears and birds are thrown at an interval up to three seconds after the competitor calls for the release.)

III. Practice and Recreation
A. Hand trap
B. Inexpensive mechanical traps
C. Trap and skeet

SAFETY

I. All general gun safety rules apply to shotgun handling (see inside back cover).

II. Some specific safety rules of shotgun shooting for recreation and competition are:
A. Only one gun should be loaded at a time.
B. Shells should be loaded singly except when doubles are being shot.
C. Gun should be unloaded and action open except when firing.

SHOTGUN RANGES

I. For all kinds of shotgun shooting including hand trap, ranges should have a safety zone of at least 300 yards in the direction of firing.

II. Range should be reasonably flat and should provide a clear unobstructed vision.

III. Background should be considered. (i.e., sky usually presents a better background for clay birds than trees.)

IV. Range should be located so that most shooting will be done to the north or northeast.

TECHNIQUES OF SHOTGUN SHOOTING

I. Stance
A. Body should be relaxed and well balanced.
B. Left leg forward supporting most of the weight.
C. Body is inclined forward "into the gun".
D. Left foot should point approximately where the shooter intends to hit the target.
E. Stance can be individualistic but beginner should start with a standard position.

II. Mounting the gun
   A. Bring gun stock to cheek rather than lowering cheek to stock.
   B. After bringing stock to cheek, the stock is moved back to the shoulder.
   C. Care should be exercised to bring gun butt to same spot on cheek and shoulder.

III. Trigger pull
   A. Proper trigger pull is described as a "slap". This describes the immediate or instantaneous pulling of trigger at the time the individual wishes to shoot.
   B. Shooter should be sure not to yank or jerk trigger as this might throw the gun off target.
   C. Trigger is not squeezed slow and steady as in rifle shooting.

IV. Aiming
   A. Whether to shoot with one or both eyes open depends upon what is best for the individual shooter.
   B. Eye or eyes should focus on the target and not on barrel or sights.

V. Lead - there are three generally accepted methods of establishing lead on a moving target.
   A. Swing through
      1. Shooter sights on a moving target.
      2. Gun swings so muzzle passes the target.
      3. With gun still swinging, the shooter fires as muzzle passes the target.
      4. This method is considered best for beginners to learn first.
   B. Sustained lead
      1. Proper lead is determined by speed, angle and range of target.
      2. Shooter maintains and swings steadily with the proper lead.
      3. With gun continuing to move the shooter fires at point ahead of target.
   C. Snap shooting
      1. Shooter picks a spot in front of moving target and fires with a stationary gun.
      2. This method is extremely difficult to learn with successful results and it is not recommended for the beginner or occasional shooter.

VI. Follow through
   A. As in most sports, follow through is vital to good shotgun shooting.
   B. Except in snap shooting the gun continues to swing well after the shot is fired.

ACTIVITIES RELATED TO SHOTGUNS

I. BB trap shooting
   A. Uses ordinary BB air rifle without sights, shooting at flying rubber breakaway targets.
   B. Inexpensive method of learning and practicing the techniques used in shotgun shooting.

II. .22 shotgun shooting
   A. Uses a smoothbore .22 rimfire gun which shoots .22 shot cartridges.
   B. Small clay pigeons are thrown from a miniature trap.
   C. Another inexpensive method of learning and practicing the techniques used in shotgun shooting.

III. Reloading
   A. Economical
   B. More uniformity possible
   C. More flexibility possible
   D. Personal satisfaction

IV. Amateur gunsmithing

V. Collecting
   A. Firearms
   B. Ammunition
   C. Accessories
   D. Artifacts

VI. Muzzle loading

SHOTGUN PRACTICAL TESTS

I. Handtrap

5 straightaway birds
5 quartering left
5 quartering right
5 crossing left
5 crossing right

II. Skeet

If length of course or skill of group is adequate, a full round of skeet may be fired. However, a more feasible test might delete shooting from station 8 and delete doubles from stations 2 and 6.

III. Trap

A full or partial round of trap may be fired.

SHOTGUN KNOWLEDGE TEST

1. Learning to shoot by using clay targets is:

   A. Useless if the shooter plans to shoot game.
   B. The most practical way to learn the fundamentals.
   C. Only for skeet and trap instruction.

2. When shooting a shotgun, you should:

   A. Have both eyes open.
   B. Have one eye closed or partially closed.
   C. Experiment and find which method is best for you.

3. Of the following shot sizes, the largest is:

   A. 2
   B. 4
   C. OOB

4. Which of the following does not apply in wing shooting?

   A. Fluid motion.
   B. Steady, relaxed trigger pull.
   C. Well balanced stance.

5. The major differences between rifles and shotguns is found:

   A. In the safety features.
   B. Inside the barrel.
   C. In the stock construction.

6. Which list of shotshell components is in the proper order?

   A. Powder, crimp, primer, and shot.
   B. Primer, shot, powder, and crimp.
   C. Primer, powder, shot, and crimp.

7. Shotgun gauge is determined by:

A. The number of lead balls of bore diameter which weigh a pound.
B. The bore diameter in inches.
C. The outside diameter of shell in centimeters.

8. Which of the following has little or no choke?

A. Modified choke.
B. Cylinder choke.
C. Full choke.

9. Which of the following is not a popular modern shotgun action?

A. Hinge.
B. Pump.
C. Autoloader.
D. Lever.

10. Which of the following wing shooting techniques is the easiest for the novice to learn?

A. Swing through.
B. Sustained lead.
C. Snap shooting.

11. The choke usually considered as a good all-around choke is:

A. Improved cylinder.
B. Full.
C. Modified.
D. Cylinder.

12. Of the following, which is not part of a shotshell?

A. Crimp.
B. Bullet.
C. Primer.
D. Shot.

13. Which of the following does not pertain to skeet shooting?

A. 25 birds.
B. Five shooting stations.
C. High and low house.

14. A round of trap does not consist of:

A. Five shooting stations.
B. 25 Birds.
C. Known angles of flight.

15. When introducing shotgunning to a novice the least desirable gun to use is?

A. 12 gauge
B. 20 gauge
C. .410 gauge
D. 16 gauge

16. Which is the largest gauge shotgun listed?

A. 16
B. 20
C. 12
D. 28
E. 10

17. When hunting rabbits preferably use which number shot?

A. Buckshot
B. BB
C. 6
D. 9

18. In proper shotgun shooting stance:

A. The body is relaxed and well balanced.
B. The left leg is forward supporting most of the weight.
C. The body is inclined "into the gun".
D. All of these.

19. In shooting with the "swing through" method:

A. Shooter maintains and swings steadily with the proper lead.
B. Shooter picks a spot in front of moving target and fires with a stationary gun.
C. Shooter swings past the target firing as the muzzle passes through the target.
D. Shooter determines proper lead by using speed, range, and angle of target.

20. When mounting the shotgun:

A. Bring gun stock to cheek rather than lowering cheek to stock.
B. Place butt on shoulder and lower cheek to stock.
C. Allow one inch air cushion between butt and shoulder.
D. It is not too important to have cheek on stock at same spot each time, since the shot spreads into a big pattern.

SHOTGUN
5 HOUR LESSON PLAN OUTLINE

HOUR 1 (Lecture)

I. Introduction
   A. Introduction of instructor and assistants
   B. Sponsor
   C. Purpose of course
   D. Class procedures

II. Brief history of shotgun

III. Nomenclature
   A. General description of shotgun
   B. Action types
   C. Ammunition and reloading (have demonstration of reloading if possible)

IV. Summary - questions and answers

HOUR 2 (Lecture and Demonstration)

I. Short review of first session

II. Gauges

III. Chokes

IV. Shotgun and general firearm safety

V. Demonstration of shotgun shooting fundamentals

HOUR 3 (Outdoors on Range)

I. Review of shotgun shooting fundamentals and safety

II. Warm up with BB trap shooting if available

III. Orientation to shotgun including loading procedure

IV. Student shooting at straightaway birds with shotgun

HOUR 4 (Outdoors on Range)

I. Review problems observed during first shooting session

II. Continue student shooting at straightaway birds

III. Begin some shooting at quartering birds and crossing birds if the skill of the class warrants.

HOUR 5 (Testing)

I. Practical tests
   A. Straightaway birds
   B. Quartering birds if skill of class warrants
   C. Do not make test too difficult
   D. Recognize and give credit for good form

II. Knowledge test - see suggested objective questions

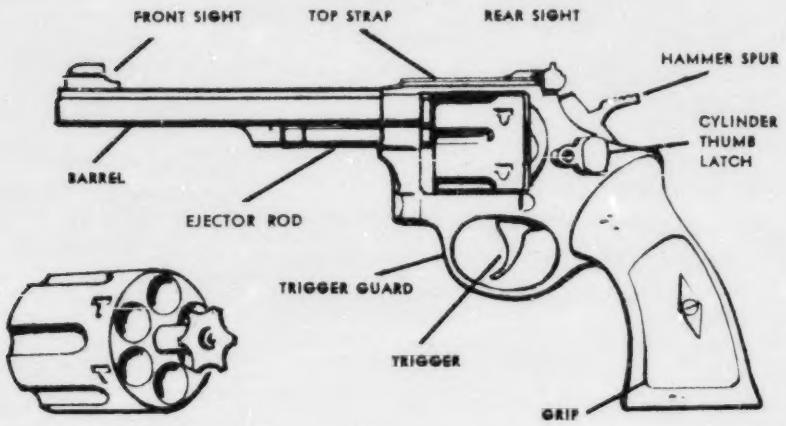
III. Correction of tests

IV. Summary and critique of course

TEACHING HINT: Do some or all of shooting at a trap and/or skeet range to familiarize students with these shooting games.

PISTOLRY

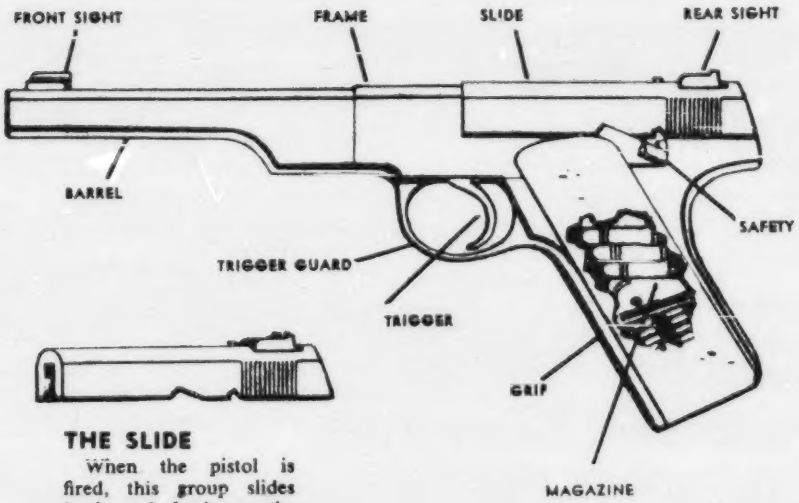
I. Nomenclature - There are some significant differences between the nomenclature of the revolver and the nomenclature of the self-loading pistol. However, they are basically the same with the main differences being in the action.



THE CYLINDER

brings a new loaded chamber into line with the barrel and hammer. The group contains the extractor.

REVOLVER



THE SLIDE

When the pistol is fired, this group slides back and forth on the frame. It contains the firing pin and the extractor.

SELF-LOADER

II. Pistol Types
- A. Revolver
  1. Single action
  2. Double action
- B. Self-loader
- C. Single Shot
  1. Not as popular as the other two types.
  2. Usually comes in hinge action.

III. Ammunition - Similar to rifle ammunition. Refer to rifle section.

IV. Ranges - Same as rifle except distances tend to be shorter on outdoor ranges. Refer to rifle section.

V. Safety - Same as rifle. Refer to rifle section. Also see inside back cover.

VI. Care and Maintenance - Same as rifle. Refer to rifle section.

VII. Related activities - Same as rifle. Refer to rifle section.

TECHNIQUES OF SHOOTING

I. Gripping the pistol.
- A. Hand should be as high on the grip as possible.
- B. Heel of hand should be directly behind the grip.
- C. Grip should be held firmly.
- D. Thumb is extended horizontally along the frame.
- E. Finger is not placed on trigger until gun is extended for firing.
- F. Trigger should be pulled by the end of the first finger near the first joint.

II. Stance
- A. Body should be turned sixty to ninety degrees from target.
- B. Weight should be distributed evenly with feet spread comfortably.
- C. Knees should be straight but not stiff.
- D. The shooting arm should be extended full length, but not stiff.
- E. Body and head are erect, but relaxed.
- F. Left arm is placed in pocket so it remains relaxed, but doesn't just hang.

III. Sighting
- A. Sight picture is the same as using a rifle with open sights.
- B. The six o'clock hold is usually used in target shooting with a pistol. It is especially recommended for beginners.

C. Both eyes should be kept open if the shooter finds it possible.

IV. Trigger control.
A. Trigger should be squeezed as in rifle shooting.
B. The finger is tightened steadily until gun fires.
C. Jerking even slightly will cause shots to stray further than is evidenced by the same action in rifle shooting.

V. Breath control.
A. Proper breathing is a vital part of pistol shooting.
B. The proper sequence is as follows:
1. Take a normal breath.
2. Let some out.
3. Hold it and fire.
C. If the shot is not fired within a few seconds, the shooter should relax and start breathing sequence over.

VI. Follow-through
A. Follow-through is as important in pistol shooting as it is in most sports.
B. The sight picture and trigger squeeze should be held a few seconds after shot.
C. Follow-through helps the shooter concentrate on basic techniques.

BASIC PISTOL SHORT COURSE
Three Hours

First Hour (Lecture)

I. Introduction
   A. Introduce self and assistants.
   B. Mention NRA and/or other organizations connected with sponsoring course.
   C. Purpose of course.
   D. Explain class procedures

II. Brief History of Pistol

III. Description of Pistol
   A. Nomenclature.
   B. Differences and similarities of revolver and self-loader.

IV. Ammunition

Second Hour (Lecture and practical application)

I. Review of previous lecture

II. Sight alignment and sight picture

III. Body position and grip

IV. Trigger squeeze, breathing, and follow-through

V. Safety and range procedures

VI. Dry firing

VII. Live firing (if time permits)

Third Hour (Review and practical application)

I. Review what had been discussed and accomplished during previous sessions

II. Dry firing for a few minutes

III. Live firing (have one target fired for record if desired)

PISTOL KNOWLEDGE TEST

1. The four assembly groups of the self-loading pistol are:
   A. Frame, barrel, action, and sights.
   B. Frame, barrel, grip, and action.
   C. Frame, barrel, action, and slide.
   D. Frame, barrel, action, and cylinder.

2. The four assembly groups of the revolver are:
   A. Frame, barrel, action, and sights.
   B. Frame, barrel, grip, and action.
   C. Frame, barrel, action, and slide.
   D. Frame, barrel, action, and cylinder.

3. The proper breathing sequence for shooting a pistol is:
   A. Take a normal breath, hold it, and fire.
   B. Take a normal breath, let some out, hold it, and fire.
   C. Take a deep breath, let some out, hold it, and fire.
   D. Take a deep breath, hold it, and fire.

True and False

T F 4. In pistol shooting, the six o'clock hold is the only way to achieve correct sight picture.

T F 5. Rhythm is as important in slow fire as it is in timed and rapid fire.

T F 6. The sight setting of a pistol means the way the sights were set when it left the factory.

T F 7. The word pistol can only be accurately used when referring to an autoloading hand gun.

T F 8. Pistols are a relatively modern firearm and came into existence during the 1900's.

T F 9. Modern pistol ammunition is of two types, rimfire and centerfire.

T F 10. "Calling the shot" is not important for the beginner since the pistol will probably recoil out of position anyway.

T F 11. When making a sight adjustment you move the rear sight in the same direction you want to move the hits on the target.

T F 12. The grip should be maintained in as high a position as possible when firing the pistol.

T F 13. The three main types of revolvers are single, double, and reverse actions.

T F 14. Empty cartridges are ejected from the cylinder of the autoloading pistol.

T F 15. Some pistol and rifle ammunition is interchangeable.

HUNTER SAFETY

PURPOSES

I. Safe gun handling - the development of good habits.

II. To give knowledge and develop proper attitudes so that gun accidents will be drastically reduced.

III. To teach sportsmanship; this goes hand in hand with safe hunting.

IV. To obtain enough knowledge and background in order to successfully hunt various game animals, and successfully shoot various guns.

V. Not intended to produce either expert marksmen or full bag limits.

SCOPE AND CONTENT

I. Knowledge of rifles, shotguns, and handguns.

II. Proper gun handling.

III. Good and proper fundamentals of marksmanship.

IV. Hunter's responsibilities and conservation practices.

V. Game laws and firearm legislation.

VI. Game identification.

VII. Hunting techniques.

WHY STRESS HUNTER SAFETY?

I. Gun accidents rank 5th in incidence.

II. Many people hunt - millions.

III. Education reduces accidents.

ACCIDENT BREAKDOWN

I. Range - Most accidents occur at close range - 10 to 50 yards.

II. Visibility - Good, not dark or hazy.

III. Time - Most accidents occur around the middle of the day, between 10 to 11 a.m. and 2 to 4 p.m.

IV. Cover - Light, not heavily wooded or brushy or tall grasses.

V. Gun - Shotgun is used when most accidents occur.

VI. Fired - Intentionally, not accidentally discharged.

VII. Age causing - 16 to 19 year old group has highest accident rate.

VIII. Many accidents occur within the hunting party.

Accidents can be avoided - There has never been a fatal accident on an NRA operated range. Safety is taught and enforced.

Hunting safer than driving car - statistically it is $2\frac{1}{2}$ times safer hour for hour.

Shooting and hunting can be safely done and are fun. These fun activities should be approached with safety forethought to keep them fun.

HUNTER RESPONSIBILITIES

I. Safety - Own and others
   - A. Proper gun handling.
   - B. Observe safe hunting practices - zones of fire, keep contact with each other visually or audibly whenever possible.
   - C. Avoid alcohol and narcotics.
   - D. Know simple first aid procedures, i.e., treatment of blisters, cuts, burns, shock, bleeding.
   - E. Equipment - carry knife, compass, matches.

II. Hunting Laws - Know state and local regulations, carry copy of game law digest on person in the field.

TEACHING HINT: Instructor should go over state game laws and distribute copies.

III. Game Identification
   - A. Habitat - where the hunted animals live, what they eat, what they look like, knowledge of runways, flyways, tracks, and trails.
   - B. Habits - when they eat, drink, sleep; trails and flyways followed at different times.
   - C. Learn before season; read books, study pictures, go into fields and woods, etc., and observe.

IV. Self-Skills
   - A. Knowledge of guns and ammunition - proper size ammunition for gun, what shot to use for various game, what bullet to use, how gun operates, etc.
   - B. Some accuracy. It is essential to shoot the gun before hunting to see how it hits and get some skill development.
   - C. Gun sighted in. Each user should sight the gun in for himself.
   - D. Hunting techniques. Know best methods for hunting the particular game sought - trying to get close to wildlife during off season is good practice.

V. Courtesy
   - A. Promote friendly HUNTER-FARMER RELATIONS.
   - B. Get PERMISSION before shooting on private land.

C. Be considerate of others.
   1. Shooters - don't encroach on other's area - find your own.
   2. Give the other fellow a chance to shoot.

VI. Clothing and Equipment
   A. Lightweight to avoid fatigue
   B. Warm enough for the day - not too warm
   C. Durable enough to stand up under hard usage but not too heavy.
   D. Protective color - especially for big game hunting the hunter should be seen by other hunters, for small game hunting also some item ought to be readily visible.
      1. Wear proper clothing so as to not be mistaken for game (warning color) - blaze orange or red are easily seen.
      2. Deer hunters - avoid anything white (even handkerchief)
   E. Protection against rain, wind, sun, snow, etc.
   F. First Aid Supplies - carry simple first aid supplies and know how to improvise others such as splints, large bandages, and litters.
   G. Camping essentials - shelter, cooking utensils, food, waste disposal, fire building, sleeping gear, etc.

VII. Care and Maintenance of Firearms
   A. Care:
      1. Proper handling habits make "care" a simple problem.
      2. Barrel obstructions - necessity to examine barrel and remove foreign materials.
      3. Cleaning - necessary if to be stored. Between uses using lightly oiled cloth to wipe off metal parts is sufficient unless gun was wet or dirty.
   B. Maintenance:
      1. Cleaning of gun with necessary equipment: bristle brush, powder solvent, patches, light oil
      2. Light coating of oil on "action" parts
      3. Barrel be thoroughly dry prior to firing and/or storage.
   C. Storage:
      1. Light coat of oil on all gun surfaces
      2. Store in horizontal position if possible
      3. Necessity of case or cabinet which allows air to circulate
      4. Storage facility be in cool, dry area which doesn't have fluctuating humidity.
      5. Store ammunition in metal cabinet in cool, dry place and locked.

VIII. Teaching Novices
   A. Help others to learn - train a youngster, remind the oldsters of their responsibilities, especially safety.
   B. Enforce safety in the hunting group - don't let anyone take chances or be negligent.

IX. Personal Health - Good level of physical fitness, adequate vision, and mental stability.

GUN USES AND SAFE HANDLING PRACTICES

I. Why - Safe Gun Handling?
   A. At least 95% of all hunting accidents are due to firearms and can be avoided if every gunner will acquaint himself with the fundamentals of gun handling and constantly practice them (almost all accidents are caused by ignorance, carelessness, and lack of training.)
   B. All guns are potentially dangerous. The "empty" gun causes accidents - the user too often thinks it is empty. Guns don't cause accidents; people cause gun accidents.

II. Three Primary Rules
   A. Treat every gun as if it were loaded.
   B. Always point the muzzle in a safe direction.
   C. Be sure of your target and backstop. Know what you're shooting at and what else is in the line of fire.

SAFE GUN HANDLING IN THE HOME

I. Store guns in locked cabinets.

II. Store guns unloaded and uncocked.

III. Store ammunition separately and locked, keep it cool and dry.

IV. Before storing - inspect, clean, and lightly oil guns. Grease may be used for long storage periods but clean before using.

V. Have gunsmith make repairs.

VI. Avoid use of "hair" triggers.

VII. If it is not to be fired, fix it so it can't be.

VIII. Don't stuff barrel during storing.

IX. Treat every gun as though it were loaded. When examining a gun, first check the action to see that it is not loaded.

X. Always point the muzzle in a safe direction.

XI. Never take a loaded gun in the house, cabin, or tent.

SAFE GUN HANDLING IN THE CAR

I. Unload guns before putting in cars.

II. Better still to unload and case them or break them down.

III. Have muzzles pointed in safe direction.

IV. Place gun in secure and safe position.

V. It is not safe to shoot from a vehicle.

VI. Don't take chance-hurried shots along the roadways.

SAFE GUN HANDLING ON THE RANGE

I. Always point muzzle in a safe direction.

II. Obey range commands instantly.

III. Open action after firing.

IV. Be sure of your target and background.

SAFE GUN HANDLING IN THE FIELD

I. Use of guns in the field includes:
   A. Target practice, skeet, trap, plinking.
   B. Hunting.

II. Field hazards include:
   A. Brush (hitting trigger).
   B. Logs, rocks, loose stone (stumble, slip off).
   C. Ditches (sink in, slip).
   D. Holes (trip and fall).
   E. Boats (slipping, losing balance).
   F. People (cutting across, getting in line of fire).
   G. Dogs (collision).
   H. Fences (snag, fall).

III. Safe Field Practices
   A. Know where your partners are at all times (whistle, talk, or see each other).
   B. Wear proper clothing (preferably red or blaze orange).
   C. Identify target positively, be sure of your target - don't shoot if not sure. Avoid sound shots - shooting at noise thinking it is animal.
   D. Always carry gun so muzzle can be controlled - even if falling. When falling, hold gun securely and control muzzle.
   E. Don't climb, jump, or run with loaded gun.
   F. Keep barrel clear of obstructions (dirt, snow, mud, sticks, leaves).
   G. Keep SAFETY ON until ready to fire.
   H. Keep your finger OUTSIDE the trigger guard until ready to shoot.
   I. Don't use gun for club, prod, or pry bar.
   J. Avoid all horseplay with guns.
   K. Point only at that which you intend to shoot - whether gun is empty or loaded.
   L. Unload unattended guns. Never lean guns against slippery surfaces like cars; they usually fall down.
   M. Don't pull a gun toward you by the muzzle.
   N. Avoid alcoholic drinks before and during shooting and hunting.
   O. Pass gun to companion before crossing fences, ditches, brush piles. Cross over and receive both guns from partner who then crosses over.

P. If walking abreast, keep guns pointed forward. Those on outside may point muzzles outward or forward.
Q. If walking behind someone, point gun away at all times - to side or up.
R. Carry gun in "ready position" as much as possible; one hand on fore-end, other on small of stock. Alternate carries:
   1. Gun in one hand at side.
   2. Gun resting in crook of arm.
   3. Shoulder carry.
S. Stay in line when on a "drive" and follow the drive plan.
T. Establish a zone of fire for all situations.
U. Never shoot a gun into cover to flush game, try throwing sticks or stones or using a sling shot.
V. Be conscious of ricochets - check the backstop. Bullets ricochet off rocks, trees, ice, water, and similar substances.
W. Always be on the alert, avoid drowsiness and tiredness.
X. Watch your footing carefully, be conscious of roots, ditches, holes, slippery surfaces, wires, rocks, etc. Go comfortably shod - wear safe shoes. Dress as lightly as possible and yet remain comfortable.
Y. Practice SELF-CONTROL - control emotions to do what you want to do only when you want to. Be courteous; it cuts down accidents.
Z. Practice shooting to acquire reasonable accuracy before hunting.

HUNTING TECHNIQUES

I. Main Methods of Hunting
   A. Still hunting (encompassing, trailing, and stalking) - stealthily going to the game.
   B. Hunting from blinds or stands - waiting for game to come to you.
   C. Drives - chasing game towards partners who are waiting.
   D. Jumping, flushing - scaring game out of cover thus exposing it for a fleeting shot.
   E. Spotting game from a conveyance - horseback, airplane, auto, or other vehicle, motorbike, all-terrain traveler, snow-mobile, boats of all kinds, etc. - used to seek game.
   F. Trailing with dogs - letting dogs run game to hunters or holding game at bay.

II. Game that is normally hunted under the various methods:
   A. Still hunting - large game animals of all kinds, especially deer; turkeys, and squirrels. This is a very challenging and satisfying method of hunting; success depends on the abilities of the hunter.
   B. Blinds or stands - large game animals of all kinds, waterfowl, turkeys, certain upland game such as mourning doves and squirrels, varmints such as crows, foxes, coyotes, and bobcats. Very productive method if game is plentiful and either moving normally, being moved, or called.
   C. Drives - large game animals of all kinds, some varmints like foxes and coyotes, certain upland game animals like rabbits and pheasants. If well organized this is a very productive method, especially for deer.

D. Jumping, flushing - large game animals of all kinds, upland game, and waterfowl. This is the main method of hunting upland game with or without the use of dogs.
E. Spotting game from conveyances - primarily for large game animals or certain large varmints such as coyotes or wolves. In many states using propelled conveyances is illegal and in most cases it is unsportsmanlike. The use of horses, however, in very rugged terrain or self-propelled craft such as boats or canoes are honorable means of searching for game.
F. Trailing with dogs - certain large game animals such as deer (in some states), bear, and wild hogs, other animals such as foxes, bobcats, coyotes, mountain lions, opossums, raccoons, and rabbits.

III. Techniques employed under the various methods:
A. Still hunting.
1. Move into the wind - keep own scent from reaching the animal.
2. Have sun at back if possible.
3. Move very slowly, a little at a time (3 or 4 steps) and stop for longer periods of time, i.e. 5 minutes.
4. Move quietly, avoid breaking of sticks under foot and scraping against brush.
5. Look all around for game and game sign-tracks, rubs, eatings, droppings, resting spots, etc. Look for horizontal shapes, odd patches of color, odd shapes among the trees, reflections off parts of animals or birds, small movements such as ear or tail flicks.
6. Listen for sounds and calls of animals hunted. The bleat of a deer, the call of a turkey or squirrel, chewing noises, plucking leaves off branches or cutting grasses, scratching or pawing for food are some of the many sounds that can be detected by an alert ear.
7. Always stop in position to shoot.
8. Move gun slowly to shoulder when readying to shoot. Do this preferably when animal is not looking at hunter.
9. When necessary to stalk (get closer), move when animal is feeding (head down). Move sideways towards animal - this presents smaller profile and may look more like tree trunk rather than man, it is easier to not get "caught" when one foot is in the air and affords less visible leg movement, and it is a better shooting position.

B. Blinds or stands.
1. Construct blind out of materials natural to the surroundings and within natural settings such as fallen trees or clump of trees. Use stumps, branches, ferns, grasses, etc.
2. Have commanding view of runways, trails, flyways, hillsides, swamps, meadows, lakes, or wherever game is known to exist.
3. Construct two blinds on opposite sides of runway to permit choice depending on wind conditions. Use blind downwind of game. Most important to have material behind self to break up silhouette. Advisable to surround self, however, so movements cannot be seen and yet hunter can see.

4. Sit quietly, move slowly, avoid smoking, stay alert, listen carefully, be patient, and wait. If calls are used, learn how to call and when to call. Probably better to call sparingly rather than too frequently.
5. If decoys are used, place them in natural, lifelike positions.

C. Drives.
1. Drivers and posters needed. The drivers push the game to the posters.
2. Drivers have wind at back and posters have wind at face.
3. Drivers may move silently or noisily, even barking like dogs or shouting.
4. Drivers should stay abreast of each other a pre-determined distance apart. Some sort of communication should prevail between them - voice contact, sight contact, whistle contact.
5. Posters should take stands at places where game would naturally move through. They should remain quite still, and be hidden as in a blind.
6. Extreme care must be taken by both drivers and posters before shooting.

D. Jumping, flushing.
1. Move through areas where game is expected - signs are evident, pre-season trips verified presence, or habitat looks ideal.
2. May surprise large game on occasion but generally the animal will hear the hunter before being seen and will sneak off to another spot.
3. In the case of upland game such as pheasants, partridge, quail, or rabbits, the hunter may make noise or try to be silent. In some cases game will flush well before the hunter has a chance of connecting, it may flush just ahead of the hunter offering a fine shot, or it may sit until almost stepped upon. The latter point suggests that the hunter move ahead in a zig-zag pattern in order to cover more area. If a dog is used, the dog should run back and forth in front of the hunter thus discovering the whereabouts of game.
4. Waterfowl may be jumped by wading marshes, lake shores, creeks, rivers, pot holes, or by using sneak boats or canoes.
5. Rabbits jumped and missed, or not seen by hunters, should be trailed if possible, or let the dog pursue them. Hunters remain at original place and wait for rabbit to return.
6. Large game animals may be successfully jumped by drifting down stream in a small craft like a canoe.

E. Spotting game from conveyances. Naturally, more area can be covered in search of game when a motor driven conveyance is used. Hunters merely relax until the desired game is seen and then plan their approach to it by foot. It is highly unsportsmanlike, dangerous, and usually illegal to shoot from a motorized conveyance.

F. Trailing with dogs. Search for game tracks and then put the dogs on the trail or let the dogs search for scent and take after the trail. A trail dog will follow the foot scent left by the game and will usually bark as it moves along. Hunters will follow the bark or position themselves in places to try to intercept the trailed game. When dogs corner the animal or tree it they will bark a different song and the hunters will then converge to that spot.

NOTE: Binoculars frequently prove beneficial in searching for game in any of the aforementioned methods.

HUNTER - LANDOWNER RELATIONS

I. Ask the landowner's permission to hunt. Some trespass laws forbid hunting on private lands without permission.

II. Sometimes a proper introduction of self will gain the farmer's permission to hunt.

III. Leave guns and dogs in car while seeking permission. If permission is granted, ask farmer or his son if they would like to accompany you. Find out where the farm's boundaries are. Leave gates as they were, either open or closed. Keep dogs under control in farmyard. Don't shoot, or even load up, until away from the farm buildings.

IV. Cross fences at posts, avoid bending any down.

V. Acknowledge any damage to the farmer. Take any litter back to car; be careful of starting fires.

VI. Thank farmer after hunt; offer some game if a fair share was taken.

VII. Buy farm produce if any is available. Develop good relations before season - visits, buying of produce, small gifts like candy, cigarettes, or cigars, etc.

PREPARE TO BE LOST

I. Carry a map of the area and a compass. Know how to use a compass, use it before being lost, trust it if lost.

II. Study map before hunting, learn roads, streams, hills, all landmarks. Plan where you will hunt and tell party members where you are going.

III. Carry in a shoulder bag or small back pack: A good knife, matches in waterproof container, a few first aid supplies, piece of cord, sheet of plastic, some candy bars, raisins, sausage or cheese, extra pair of wool socks, halazone tablets, plastic cup, whistle, flashlight, extra ammunition.

IV. While hunting observe where the trail is taking you, look back occasionally to see where you have been, observe the prominent landmarks - the big tree, the top of the hill, the creek bed, etc.; blaze the trail if it seems like you might be getting mixed up.

WHAT TO DO IF LOST

I. Back track if possible, follow blaze trail back, head in opposite direction of the one traveled (if track was kept), orient self on map, use sun for direction indicator, go back to prominent landmarks.

II. If the above fails, and the decision is reached that you are hopelessly lost: Sit down and eat some candy. Calm fear, think clearly, face the fact of being lost, and accept the challenge. Shout, blow whistle, shoot gun three times in succession (repeat occasionally).

III. Stay put, don't make the country an enemy by fighting it. Build fire or better still, build three fires in a straight line. Keep fires smoking during the day; at night keep fires glowing. The three signal fires should be built some distance from each other so they won't look like one fire.

IV. Gather lots of wood, look around immediate area for food and water. Don't worry about lack of food; it is possible to go for three weeks without any. Water is needed, however.

V. Conserve energy by working mildly and not rushing around.

VI. Make a camp-bough bed, lean-to, use plastic sheet if carried. Build camp and fires where they might be easier seen from the air or by people who may be searching on foot or horseback.

VII. A fire may be started without matches by removing the shot from a shotgun shell and firing the blank into dry grass at close range.

VIII. Sleep or nap by the fire; the rest will do wonders.

IX. Keep a hopeful mental attitude; avoid despair. Wave most colorful clothing if plane is spotted.

X. Make 30 foot letters in snow - SOS LOST.

XI. If plane flies over the pilot will probably wag his wings to recognize he's seen you. Then fly off in a direction and come towards you again and fly off in the same direction. This is a signal to head in that direction to safety.

XII. Save energy, stay around the camp and the fires, blaze trails in four directions from the camp, and don't venture off more than a half mile or so in any direction in search of food or water.

XIII. Treat any wounds, cuts, scratches, and scrapes which were picked up.

HUNTER SAFETY - A ONE HOUR LECTURE OUTLINE

The need for hunter safety instruction. Some general suggestions on handling guns safely in the home, car, and field. What is the difference between a rifle and a shotgun? What is gauge, caliber, choke? What are a few main parts of a gun and a shell or cartridge? What are a few things we need to know about game laws? What are a few ways of hunting big game or small game?

HUNTER SAFETY - 4 HOUR LESSON PLAN OUTLINE

Day	Lesson
1.	Need for hunter safety, safe gun handling in the home, car, range, and field.
2.	Guns and ammunition - uses, actions, choke, gauge, shot size, caliber, storage, care, and cleaning.
3.	How to shoot rifles and shotguns - the fundamentals demonstrated, differences shown. Safety in use stressed.
4.	Briefly discuss game laws, game identification, and hunting techniques. Testing.

TEACHING HINT: Use movies, slides, and charts to help illustrate any of the above lessons and pass out booklets and leaflets which will give students further information.

HUNTER SAFETY - 10 HOUR LESSON PLAN OUTLINE

Day	Lesson
1.	Orientation, purpose, scope, requirements, need for hunter safety.
2.	Gun uses and safe handling practices in the home, car, range, and field.
3.	Guns and ammunition - actions, gauge, caliber, shot size, effective range, choke, reloading, and nomenclature.
4.	Riflery: Range safety, shooting fundamentals, sight picture, prone position, sighting in, firing target.
5.	Riflery: Review of prone position, sighting in, prone target, fundamentals of sitting position, firing sitting target.
6.	Riflery: Sighting in, fundamentals of kneeling position, firing kneeling, fundamentals of off-hand position, firing off-hand position.
7.	Shotgunning: Fundamentals - stance, shouldering, pointing, trigger slap, follow-through, shooting going-away targets.
8.	Shotgunning: Review fundamentals, shoot going-away targets.
9.	Shotgunning: Review and shoot quartering targets.
10.	Briefly cover game laws, hunter responsibilities, hunter-farmer relations, game identification, and hunting techniques. Testing. Certification.

HUNTER SAFETY - 20 HOUR LESSON PLAN OUTLINE

Day	Lesson
1.	Orientation, purpose, scope, requirements, need for safety.
2.	Guns - their uses and safe handling practices.
3.	Guns - kinds of actions, nomenclature, ammunition, reloading.
4.	Shotgun shooting, fundamentals of stance, swing, trigger-pull, and follow-through. Practice.
5.	Shotgun shooting, review and practice, straight away birds.
6.	Shotgun shooting, review and practice, quartering right.
7.	Shotgun shooting, review and practice, quartering left.
8.	Shotgun shooting, review and practice, crossing.
9.	Shotgun Range - shoot for score, 10 shots at straight away birds.
10.	Game Laws, hunter responsibility.
11.	Hunter clothing and equipment. Lecture and demonstration by local sporting goods firm.
12.	Conservation practices, need for conservation. Possible outside speaker or movie.
13.	Game identification and hunting techniques.
14.	Riflery: Range safety, fundamentals, sighting, prone firing.
15.	Riflery: Review prone, fundamentals of sitting position, fire prone and sitting.
16.	Riflery: Review sitting, fundamentals of kneeling position, fire sitting and kneeling.
17.	Riflery: Review kneeling, fundamentals of off-hand position, fire kneeling and off-hand.
18.	Riflery: Brief review of four positions and shoot for score in these four positions.
19.	Pistol orientation and firing (if facilities and equipment are available), or review course.
20.	Knowledge test. Certification.

SUGGESTED HUNTER SAFETY KNOWLEDGE QUESTIONS

1. An experienced man, on picking up any gun, invariably first:
   a. looks to see if the safety is on.
   b. opens the action and looks to be sure the gun is unloaded.
   c. points the gun in a safe direction before pulling the trigger to see if the gun is cocked.

2. Any gun can be safely carried in a car or boat if:
   a. it is unloaded before being put in.
   b. the safety is put on.
   c. the gun is carried vertically so any accidental discharge would go up in the air.

3. Under the Federal Migratory Bird Act, a hunter may use:
   a. a rifle, .22 caliber or larger, to reach out for swimming ducks out of shotgun range.
   b. any shotgun.
   c. a shotgun capable of firing not more than three shells before reloading.

4. The principle difference between a shotgun and a rifle is that a shotgun:
   a. is not so dangerous because the shot doesn't travel very far.
   b. usually has two barrels instead of just one.
   c. does not have a spirally grooved barrel.

5. When a gun is being stored from one season to the next it should:
   a. be wiped with an oily cloth and placed in a moisture resistant case.
   b. be thoroughly cleaned, the action lightly oiled, a light coating of good gun grease swabbed in the barrel, and wiped over all metal parts.
   c. be thoroughly cleaned, action greased, barrel greased inside and out, a stopper firmly seated in the muzzle to keep out dust.

6. More than half of the victims of hunting casualties are shot in mistake for game, sometimes in spite of protective colors on clothing. This seems to indicate:
   a. that even experienced hunters should be aware constantly of the necessity for checking their target carefully before firing.
   b. that safety training is of no value.
   c. that eye tests should be made mandatory for licensing.

7. Select from these gun safety rules the one considered most important.
   a. Always keep the safety on.
   b. Treat every gun always as though it were a loaded gun.
   c. Always look before you shoot.

8. Game laws should be obeyed because:
   a. if you don't obey them the game warden may catch you and you will have to pay a fine.
   b. they are intended to protect the game and assure a good future for the sport of hunting.
   c. they are approved by the Federal Fish and Wildlife Service.

9. Which of the following would make the best backstop?
   a. a quarry wall
   b. a live tree
   c. a hill free of rocks

10. After a long day's hunt in deer season, a hunter got a long, standing shot at a buck across a steep ravine. The deer jumped at the shot but immediately disappeared in heavy brush. The hunter, who was a good sportsman, said:
   a. "I think I missed him; maybe I'll have better luck tomorrow."
   b. "It was too long a shot. I should have waited 'til I could get closer."
   c. "I don't know if I hit, but I'm going over and have a look, I hope it's either a dead deer or a clean miss."

11. While three men are walking abreast, the middle man's gun should point:
   a. to the left most of the time.
   b. to the right most of the time.
   c. ahead all the time.

12. While three men are walking single file, the middle man's gun should point:
   a. over his shoulder.
   b. to the right or left.
   c. down and ahead.

13. While hunting, the gun's safety should be pushed off:
   a. as soon as the gun is loaded.
   b. when game is expected to flush.
   c. just before firing.

14. While three men are walking abreast, a bird flushes to the rear of the middle man.
   a. Neither man should shoot.
   b. The left or right man may shoot.
   c. Only the center man should shoot.

15. When stumbling or falling while hunting:
   a. hold onto gun and control the muzzle.
   b. drop the gun and use hands to break the fall.
   c. put safety on.

16. The safest gun is one:
   a. with the safety on.
   b. pointed in a safe direction.
   c. with the action open.

17. A good deer hunter fires only when he can:
   a. see a flash of white.
   b. see the deer clearly enough to determine it is a legal deer.
   c. hear a deer moving toward him after having seen it enter a thicket.
   d. identify the animal clearly and be sure it is a safe shot.
   e. see the outline of the deer clearly.

18. Which of the following animals is being hunted when the highest percentage of accidents occurs?
    a. deer
    b. rabbits
    c. pheasants
    d. ducks
    e. squirrels

19. Which of the following is not a proper target in the field? Assume all have a safe backstop.
    a. tin can
    b. bottle
    c. stump
    d. balloon
    e. clump of grass on hillside

20. Which is the most important point listed?
    a. Carry a compass and trust it.
    b. Don't hunt alone.
    c. Carry a map, know how to use it with the aid of a compass, use them.
    d. Carry a pack of matches in a waterproof container and a good hunting knife.
    e. Stay within one-hundred yards of the car when hunting deer in a strange country.

21. Number 8 shot would be best used to shoot:
    a. squirrels.
    b. quail.
    c. rabbits.
    d. partridge.
    e. ducks.

22. The most hunted small game in the United States is:
    a. squirrels.
    b. quail.
    c. rabbits.
    d. partridge.
    e. ducks.

23. A full choke gun would generally be most useful for hunting:
    a. rabbits.
    b. quail.
    c. ducks.
    d. partridge.
    e. pheasants.

24. If a hunter becomes lost in the woods at sundown, his best plan would be to:
    a. prepare to spend a night in the woods.
    b. fire three spaced shots as a distress signal.
    c. call out at regular intervals.
    d. use and trust his compass and walk out.
    e. shoot a doe and eat a hearty meal of venison.

25. A good hunter safety course is designed mainly to:
    a. improve a person's shooting accuracy.
    b. acquaint people with hunting methods, gun safety, and elementary shooting techniques.
    c. teach people to be good hunters in the field so they can get more game.
    d. teach people the dangers involved in violating the game laws.
    e. teach people the game laws.

True and False

T F 26. In hunter casualty cases, most of the discharges are intentionally made.

T F 27. Number four shot is ideal for partridge.

T F 28. Few accidents have been caused by hunters with scopes on their rifles.

T F 29. Migratory waterfowl are hunted under Federal regulations.

T F 30. A running rabbit leaves a "V" track, the open end pointing in the direction of travel.

T F 31. Most hunting accidents can be attributed to poor visibility in the hunting environs.

T F 32. A 30.06 is ideal to use on jackrabbits.

T F 33. The most productive method of hunting deer is still hunting.

T F 34. A zone of fire means the distance a bullet will travel.

T F 35. Horizontal storage of guns is superior to vertical.

T F 36. It is not safe to carry several gauges of ammunition in your pockets because of the danger of inadvertently using the wrong shell.

T F 37. A shotgun may be considered safer than a rifle because the shot does not travel as far.

T F 38. When the safety is "on" on any firearm, it is positive insurance that it will not discharge accidentally.

T F 39. When experienced hunters are out, there is not particular need for agreement as to zones of fire.

T F 40. "Sound" shots - shooting in the direction of sounds of movement - are safe provided you think no one is close by.

43

Matching

Match column 1 with most appropriate word or phrase from column 2.

43.	Loading	a.	Muzzle pointed away from companions
41.	Making a gun inoperative	b.	Removing firing pin
42.	Cause of guns blowing up	c.	Obstructions in barrel
44.	Vital hunting equipment	d.	Compass
48.	Good hunter-landowner relationships	e.	Ask permission to hunt
47.	Basic cause of accidents	f.	Carelessness
50.	White handkerchief	g.	Deer's "flag"
45.	Safe carry when last in single file	h.	Gun over shoulder
46.	Treat every gun as though it were loaded	i.	Basic rule of safety
49.	Bag limits	j.	Conservation practice

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Smith, W. H. B., Gas, Air, and Spring Guns of the World. Harrisburg, Pa.: Stackpole Co., 1957. 279 pp. illus. Complete technical data for representative samples of every major manufacturer of the world.

Smith, W. H. B., Small Arms of the World. Harrisburg, Pa: Stackpole Co., 1969. 768 pp. illus. A technical book including sporting and military firearms of all nations.

Whelen, Townsend, ed., The Ultimate in Rifle Precision. 5th rev. ed. Harrisburg, Pa.: Stackpole Co., 1958. 320 pp. illus. Explains the tools, techniques, and regulations of bench rest shooting.

The following manuals are available from the National Rifle Association, 1600 Rhode Island Avenue, N. W., Washington, D. C. 20036 (25¢ each):

Basic Pistol Marksmanship
Basic Pistol Marksmanship: Instructor's Guide
Basic Rifle Marksmanship
Basic Rifle Marksmanship: Instructor's Guide
Basic Shotgun Instruction
Basic Shotgun Instruction: Instructor's Guide

Hunting

Anderson, Luther, How to Hunt Deer and Small Game. New York: Ronald Press Co., 1959. 140 pp. illus. Information on firearms to use, training dogs, field dressing, camping, and gun safety.

Bauer, Erwin A., The Duck Hunter's Bible. Garden City, N. Y.: Doubleday & Co., Inc., 1965. 160 pp. illus. A guide for the beginning waterfowl hunter.

Brown, Pete, Guns and Hunting. New York: A. S. Barnes & Co., 1955. 244 pp. illus. Informal presentation of gun and hunting information by a leading gun editor.

Camp, Raymond R., Game Cookery in America and Europe. New York: Coward-McCann, 1958. 252 pp. Contains a wealth of detailed recipes for preparation of all major game birds and mammals.

Camp, Raymond R., ed., The New Hunter's Encyclopedia. 3rd rev. ed. Harrisburg, Pa.: Stackpole Co. 1131 pp. illus. Prominent writers cover every subject associated with hunting in America.

Hayes, Tom, Hunting the Whitetail Deer. New York: A. S. Barnes & Co., 1960. 256 pp. For the hunter who wants to learn more about the whitetail.

Helmericks, Constance, Hunting in North America. Harrisburg, Pa.: Stackpole Co., 1957. 298 pp. illus. Covers a wide range of subjects of interest to every hunter.

Kortright, F. H., The Ducks, Geese and Swans of North America. Harrisburg, Pa.: Stackpole Co., 1942. 476 pp. illus. A reference for waterfowl with description, life story, range and names.

Moxon, P. R. A., Gundogs: Training and Field Trials. New York: British Book Center, 1952. 223 pp. illus.

National Rifle Association, Hunter Safety Handbook. Washington, D. C.: NRA, 1956. Textbook for students.

National Rifle Association, Hunter Safety Instructor's Guide. Washington, D. C.: NRA, 1956. How to conduct an NRA Hunter Safety Course.

Ormond, Clyde, Complete Book of Hunting. New York: Harper & Row, 1962. 467 pp. illus. Comprehensive book on hunting almost every type of game in North America.

Popowski, Bert, Calling All Game. Harrisburg, Pa.: Stackpole Co., 1952. 306 pp. illus. Hunting tips on decoying and calling upland game, waterfowl, deer, antelope, turkey, elk, and moose.

Popowski, Bert, Calling All Varmints. Harrisburg, Pa.: Stackpole Co., 1952. 306 pp. illus. A clear discussion of this growing year-round sport.

Sell, Francis E., Small Game Hunting. Harrisburg, Pa.: Stackpole Co., 1955. 158 pp. illus. A how-to-do-it book by an experienced hunter who demonstrates how the stalk, arms and ammunition, and type of shots for small game correspond to big game hunting.

Survival

Angier, Bradford, Living Off the Country. Harrisburg, Pa.: Stackpole Co., 1956. 241 pp illus. Information on how to survive if lost in the woods.

Jaeger, Ellsworth, Wildwood Wisdom. New York: Macmillan Co., 1945. 491 pp. illus. A classic for anyone entering the woods.

Jaeger, Ellsworth, Woodsmoke. New York: Macmillan Co., 1953. 228 pp. illus. The ideal companion for the hunter in the woods.

Mason, Bernard, Woodsmanship. New York: A. S. Barnes & Co., 1954. 90 pp. illus. A help to the hunter in the field, this book is rich in the lore of the woods.

Olsen, Larry Dean, Outdoor Survival Skills. Provo, Utah: Brigham Young University Press, 1967. 188 pp. illus. A class proven approach to survival through dependence on the bounties of nature.

Whelen, Townsend, and Bradford Angier, On Your Own in the Wilderness. Harrisburg, Pa.: Stackpole Co., 1958. 324 pp. illus. Covers all phases of camping and travel in primitive areas.

VISUAL AIDS

I. Films - Rather than list the many films available on shooting, hunting, conservation, and related subjects, the sources and addresses where films can be obtained are listed. Write for specific film lists and instructions from each source.

Association Films
561 Hillgrove Avenue
LaGrange, Illinois 60525

Boyd Film Company
1569 Selby Avenue
St. Paul, Minnesota 55104

Browning Arms Company
1706 Washington Avenue
St. Louis, Missouri 63103

Canadian Travel Film Library
Suite 710
1200 Sixth Avenue
Detroit, Michigan 48226

Conklin, Labs and Beebe, Inc.
Public Relations Department
Box 375, GM Circle
Syracuse, New York 13201

Daisy Manufacturing Company
Att: Mr. Jack Reed
P. O. Box 220
Rogers, Arkansas 72756

Ducks Unlimited, Inc.
Film Department
P. O. Box 66300
Chicago, Illinois 60666

Engleman Visual Education Service
14533 Second Avenue
Detroit, Michigan 48203

Grayling Film Service
Route #1
Grayling, Michigan 49738

High Standard Manufacturing Corporation
Advertising Department
1817 Dixwell Avenue
Hamden, Connecticut 06514

Michigan Department of Natural Resources
Film Loan Service
Stevens T. Mason Building
Lansing, Michigan 48926

Modern Talking Picture Service
14533 Second Avenue
Detroit, Michigan 48203

Ralston Purina Company
Supplies Service Division
Checkerboard Square
St. Louis, Missouri 63199

RCBS, Inc.
P. O. Box 729
Oroville, California 95965

Redfield Film Library
Thomas J. Barbe Productions, Inc.
2130 South Bellaire Street
Denver, Colorado 80222

Sierra Bullets
600 West Whittier Boulevard
Whittier, California 90602

Speer, Inc.
Film Department
P. O. Box 641
1023 Snake River Avenue
Lewiston, Idaho 83501

Sport Fisheries and Wildlife, Bureau of
U. S. Department of Interior
1006 West Lake Street
Minneapolis, Minnesota 55408

Sterling Movies, Inc.
309 West Jackson Boulevard
Suite 100
Chicago, Illinois 60606

II. Filmstrips - The following filmstrips can be purchased from the National Rifle Association, 1600 Rhode Island Avenue, N. W., Washington, D. C. 20036:

"The Gun" - Visual aid for instructor use in teaching hunter safety.

"Rifle Shooting" - Basic instruction and prone.

"Rifle Shooting" - Sitting, kneeling, and standing.

"Pistol Shooting" - Basic pistol instruction.

"Shotgun Shooting" - Basic shotgun instruction.

GLOSSARY

Action	The parts assembly which loads, fires, and unloads a gun.
Air gun	The projectile is propelled by a charge of compressed air. Most types can also be called spring guns.
Automatic	A fully automatic gun continues to fire as long as the trigger is held back or the magazine contains fresh cartridges. A semi-automatic gun, the only type used in sport, fires only once for each pull of the trigger but automatically ejects the spent round and feeds in a fresh one.
Backing target	A blank piece of target paper placed behind the target to determine if all shots in the target came from the same firing point or if two or more shots were fired in the same hole.
Ballistics	The science of moving projectiles.
Barrel	That portion of a firearm through which the bullet or shot passes.
Beavertail	The fore-end grip of a shotgun or rifle that is made wider than standard.
Bedding	The parts of a gunstock which are cut away to hold the metal parts of a gun.
Bluing	The chemical process which darkens the color of steel to protect the metal from corrosion and lessen reflection.
Bore	The inside of the barrel of a rifle, revolver, shotgun, or pistol. Bore diameter is measured across the lands of a rifled barrel.
Breech	The rear end of the bore of a firearm where the cartridge is inserted into the chamber.
Breech bolt	The part in the breech that takes the thrust of the explosion when the shell or cartridge is fired.
Buckshot	Shot of the larger sizes.
Bullet	The projectile fired from a rifle or pistol.
Bull gun	A target rifle, pistol, or revolver with an exceptionally heavy barrel.
Bullseye	The round black center of a typical paper target.
Butt plate	A plate covering the rear end of a gunstock to reinforce and protect it. It is usually corrugated to prevent slipping when held against the shoulder.

Caliber	The diameter of the bore of a rifle or pistol in thousandths of an inch. Usually measured from land to land, which gives the diameter before the rifling grooves were cut.
Calling the shot	The shooter describing the location of the hit on the target, based on his sight picture at the time he fired the gun.
Cant	The tilting of the firearm to either side from a truly horizontal sighting plane. Canting causes bullet impact to be low and to the side.
Case	The metallic, paper, or plastic case or shell which contains the powder charge and into which the cap (primer) powder, and bullet or shot are inserted.
C.F.	Center fire (cartridge). Those with primer or cap located in center of case.
Chamber	The enlarged portion of the bore, near the breech, in which the cartridge rests in position to be fired.
Checkering	A multi-diamond pattern cut into the grip and forearm; is decorative and provides a better grip.
Check piece	A raised area on the side of the stock, against which the shooter's face can fit with comfort
Choke	The constriction in the muzzle end of a shotgun bore by means of which control is exerted upon the shot charge in order to direct the pellets into a definite area of predetermined concentration.
Clay pigeon	Disc of formed clay used as target in informal and competitive shooting games.
Click	A unit of movement in a micrometer rear sight.
Clip	A holder for cartridges. (See magazine)
Comb	The upper edge of a gunstock against which the cheek rests.
Corrosion	The eating away of the metal in firearms; the deterioration of the bore due to rusting or the action of salts deposited from the cap or powder.
Crimp	The extreme edge of the cartridge case where it is bent inward to grip the bullet tightly. In shot shells, the fold-over of the end of the paper shell which holds the shot charge in place.
Cross fire	Shot fired by a shooter on someone else's target.

Cylinder	Circular chamber of revolver action which contains ammunition, revolves to bring new loaded chamber into line with the barrel and hammer. Usually contains extractor.
Damascus barrels	Shotgun barrels, primarily made prior to 1900, of alternative iron and steel ribbons, twisted and welded together. Much weaker than those of today; unsafe for modern smokeless ammunition.
Double action revolver	Each trigger squeeze cocks the hammer, revolves and positions the cylinder, and fires the gun. In loading, cylinder chamber swings out and away from the frame.
Dry firing	Aiming and squeezing the trigger of an unloaded gun. When done at length, a fired cartridge case or dummy cartridge should be in the chamber to cushion the firing pin.
Ejector	The mechanism which throws a cartridge or empty case from the gun.
Elevation	The term used to designate the vertical movement of an adjustable rear sight to cause the bullet to strike the point of aim at various ranges. Often measured in clicks.
Energy	Designating the amount of work performed by a bullet, expressed in foot-pounds.
Erosion	The wearing away of the bore of an arm due to friction from the bullet or shot.
Extractor	(See ejector)
Firing pin	That part of the action of a firearm, controlled by the trigger which strikes the primer causing the firing of the cartridge.
Floating barrel	A barrel is said to "float" when it does not touch the fore part of the stock.
Flyer	A bullet hole well out of a group on the target.
Fore-end (Forearm)	The forward portion of the wood stock under the barrel serving as the fore grip on the arm.
Fouling	A deposit of residues from burning powder or from bullet metal on the interior surface of a barrel, which in excess is detrimental to accuracy.
F.S.	Foot seconds; used in giving bullet velocities in feet per second.
Gauge	The unit of measurement for shotgun bore diameters, determined by the number of solid lead balls of the bore diameter obtainable from one pound of lead.

Gr.	Grains: unit of weight used for bullets or powder charge (437.5 grains = 1 ounce avoirdupois).
Grip	The small part of the stock gripped by the trigger hand when firing a gun.
Group	The term applied to a series of shots fired at a target with a constant point of aim and sight setting, to test accuracy.
Hair trigger	Trigger pull has been lessened through alteration of sear. Extremely unsafe condition, expecially for a hunting firearm.
Hammer	That part of the action controlled by the trigger which drives the firing pin to strike the primer, firing the cartridge.
Hang-fire	Ignition which is not instantaneous. Rare.
Hasty sling	A quick method of wrapping the sling around the arm without using the arm loop.
Head	Brass or other metal forming base of shotgun case.
Heel	The rear end of the upper edge of the gunstock, at the upper edge of the butt plate.
High intensity	A term designating arms and cartridges developing velocities over 2,500 feet per second.
High power	(Big bore) A term designating cartridges or arms having velocities over 2,000 feet per second. Commonly those over .22 caliber.
Hollow point	(Bullet) A fast-expanding bullet constructed with a cavity in the nose.
Keyhole	The irregular hole made in a target by a bullet which has lost stability and is tumbling end over end.
Kneeling pads	Pads inserted under or attached to knees for comfort and cleanliness in the kneeling position.
Lands	The raised portion of the bore between rifling grooves.
Leading	Particles of bullet metal torn off as the bullet passes through the bore, which adhere to the bore. In the case of jacketed bullets, this is known as metal fouling.
Line of sight	The straight line from the eye through the sights to the target or point of aim. (See sight picture)
Lock	The firing mechanism of a rifle, pistol or shotgun.

L.R.	Long rifle. The designation of a popular .22 caliber rim fire cartridge which is extensively used for target and small game shooting.
Magazine	Part of firearm which holds extra cartridges. (See clip)
Magnum	A term applied to large-cased cartridges or shells of extra-powerful capability.
Mat	Used for comfort and cleanliness while shooting prone, sitting, and kneeling.
M.C.	Metal case. (Hard nose or full metal jacket) A type of bullet in which the lead is completely encased, except at the base, in a jacket of cupronickel, copper, or steel.
M.E.	Muzzle energy (of a bullet). The bullet's capacity for striking a blow or overcoming resistance, usually expressed in foot-pounds.
Midrange	Usually used with reference to trajectory, this term designates a point approximately midway between the muzzle and target or point of impact.
Mushroom	A popular term for soft-point or hollow-point bullets, so called because of the ability of the bullet to expand to a greater sectional diameter upon impact.
Muzzle	The forward end of a rifle, pistol, or shotgun barrel; the point at which the bullet or shot leaves the arm.
M.V.	Muzzle velocity. The speed at which the bullet is moving when it leaves the gun, usually expressed in feet per second (F.P.S.).
Neck	The section of a "bottle-neck" cartridge case extending from the shoulder to the mouth or open end.
NRA	National Rifle Association, 1600 Rhode Island Avenue, N. W., Washington, D. C. 20036. The official national body which promotes and supervises rifle and pistol shooting competitions.
Paige Sighting Device	Device placed in rifle muzzle which provides a graphic representation of the "target." To be moved by the student to provide the proper sight picture.
Patch	A piece of cloth used in cleaning the bore. Also, the identifying insignia worn by many shooters on shooting jackets.
Pattern	The term designating the distribution of shot fired from a shotgun, usually for comparative purposes, measured as a standard at 40 yards, and within a circle of 30 inches in diameter.

Pinwheel	A shot placed in the exact center of a target bullseye.
Pistol	Firearm designed to be held and used with one hand. Commonly used in reference to a semi-automatic hand gun.
Pitting	Visibly corroded areas in the bore.
Plinking	A coined word for informal shooting.
Possible	The formal target shooter's perfect score; all possible points have been made.
Pressure	The outward thrust of the burning powder gases against case, chamber and bore. Usually measured in the breech area and recorded in pounds per square inch.
Primer	The small cup or cap seated in the center of the base of a center fire shell or cartridge, and containing the igniting composition. When the primer is indented by the firing pin, the priming composition is crushed and burns very rapidly, thus igniting the charge of powder. Rim fire cartridges contain the priming composition within the folded rim of the case, where it is crushed in the same manner.
Projectile	The shot, ball, or bullet fired from any firearm.
Pupil-coach	Instructional method where shooters pair off, alternately serving as the shooter (pupil) and coach, who assists in preparation, handling ammunition, constructive criticism.
Range commands	Series of verbal procedures used in organized shooting. Provide the safest approach to group shooting.
Receiver	The frame, consisting of breech, locking and reloading mechanisms, of shotgun or rifle.
Recoil	The art of drawing or falling back of a firearm as the result of the powder ignition, gas formation and expansion, and the resulting propelling of the projectile (either bullet or shot) through the barrel.
Revolver	A hand gun having a revolving cylinder as a cartridge container; manually.
Ricochet	Glancing of a bullet or shot off from an object.
R.F.	Rim fire (cartridges). Priming composition found within the folded rim of the case.
Rifling	Spiral parallel grooves cut into the bore of rifles and pistols to impart a spin to the bullet, insuring steady flight, point on, to the target.
Rim	The projecting edge of the head of a shell, upon which the extractor takes hold.

Round	One cartridge or shotgun shell.
Safety	The part of the action designed to prevent discharge by blocking the hammer, sear, or trigger.
Sear	The part of the action which releases the hammer when the trigger is pressed.
Shot	Projectiles usually consisting of chilled lead pellets.
Shooting glove	A sheepskin or padded leather glove which protects the left hand of a rifleman using a tight sling.
Sights	Devices used to guide the eye in aiming a firearm, usually consisting of a small fixed bead or piece of metal near the muzzle and a notch or aperture near the breech.
Sight picture	Alignment of front and rear sights on the target. (See line of sight)
Sighting bar	Instructional sighting device with movable graphic representations of both sights and the target.
Sighting shots	Practice shots, to align or check the sights.
Single action revolver	Hammer must be cocked manually to position the cylinder and ready for firing. Cylinder does not swing away from frame for loading.
Slide	Movable group on pistol which contains the firing pin and extractor; slides back and forth on the frame.
Skeet	Competitive shooting game, two shots fired from eight different stations, then "doubles" from stations 1, 2, 6, and 7, plus additional shot from station of first miss (totaling 25 shots). Targets come from two houses, high and low.
Smallbore	Common term applied to rifles of .22 caliber or less.
S.P.	Soft point, soft nose, or mushroom (bullet). A jacketed bullet having some lead exposed at the point.
Spotting scope	A small telescope used to observe hits on a target from the firing point.
Stock	The wooden part of a firearm to which the barrel and firing mechanism are assembled.
Target carrier	A device which moves the target back and forth between the shooter and the backstop.
Toe	The rear end of the lower edge of the gunstock, at the lower edge of the butt plate.

Trajectory	The path described by a bullet from muzzle to target.
Trap	Competitive shooting game, 5 shots fired from 5 different stations (totaling 25 shots). Targets thrown from a single trap house, but at unknown angles.
Triangulation	Sighting practice where inoperable rifle is placed on firm rest. "Shooter" sights down rifle and directs person acting as "marker" as to the placement of target on piece of paper located some distance from "shooter." When sight picture is correct, "marker" puts pencil dot on paper. "Shooter" relaxes and repeats same procedure twice. Dots are joined by straight lines forming triangle. Smaller the triangle, better the sighting picture.
Trigger weight	A certified weight suspended from the trigger to test the pull. Rifle triggers must support a weight of three pounds in most competitive shooting matches.
Velocity	The speed at which the bullet travels, measured in feet per second.
Wads	Single or multi-units made of plastic or compressed paper which maintains pressure on the powder and occupies the space between powder and shot.
Windage	The term used to designate the horizontal movement of an adjustable rear sight to cause the bullet to strike a point of aim at various ranges. Often measured in clicks.
X-ring	The small dotted circle within the 10-ring of some rifle match targets.
Zero	The gun's sight adjustment which causes the bullet to hit the exact center of the target at a given range.
Zone of fire	Area which hunter can safely shoot over.

10 COMMANDMENTS OF SAFETY

by the Sporting Arms and
Ammunition Manufacturers'
Institute

1. Treat every gun with the respect due a loaded gun. This is the first rule of gun safety.

2. Guns carried into camp or home, or when otherwise not in use, must always be unloaded, and taken down or have actions open; guns always should be carried in cases to the shooting area.

3. Always be sure barrel and action are clear of obstructions, and that you have only ammunition of the proper size for the gun you are carrying. Remove oil and grease from chamber before firing.

4. Always carry your gun so that you can control the direction of the muzzle even if you stumble; keep the safety on until you are ready to shoot.

5. Be sure of your target before you pull the trigger; know the identifying features of the game you intend to hunt.

6. Never point a gun at anything you do not want to shoot; avoid all horseplay while handling a gun.

7. Unattended guns should be unloaded; guns and ammunition should be stored separately beyond reach of children and careless adults.

8. Never climb a tree or fence or jump a ditch with a loaded gun; never pull a gun toward you by the muzzle.

9. Never shoot a bullet at a flat, hard surface or the surface of water; when at target practice, be sure your backstop is adequate.

10. Avoid alcoholic drinks before or during shooting.